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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,315

05/04/2006

Yuuichi Iwamoto

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EXAMINER

LAZO, THOMAS E

ART UNIT

PAPER NUMBER

3745

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,315	<b>Applicant(s)</b> IWAMOTO, YUUICHI	
	<b>Examiner</b> Thomas E. Lazo	<b>Art Unit</b> 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/4/06</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Izumi et al. (4,606,313). Izumi et al. discloses a load control device for an engine of a work vehicle with an engine 1 in which a target speed is set to a value in a range from a low idling speed  $N_{ri}$  to a high idling speed  $N_{rh}$ , a plurality of variable displacement hydraulic pumps 2,3 driven by the engine 1, a plurality of hydraulic actuators (reference in col. 21, line 46-51) to which pressure oil discharged from the plurality of variable displacement hydraulic pumps 2,3 is supplied; absorption torque changing means 4,5 for changing absorption torque for one or more of the variable displacement hydraulic pumps 2,3, engine speed detection means 10 for detecting an engine speed, and control means 13 for reducing the absorption torque of the variable displacement hydraulic pump 2,3 when the detected engine speed is decreased to a predetermined threshold value or lower, wherein the predetermined threshold value is an engine speed equal to or lower than the low idling speed, the absorption torque changing means 13 is means for changing maximum absorption torque of the hydraulic pump 2,3, an operating element (accelerator mentioned in col. 5, line 6) is provided for setting a target engine speed according to an operating amount thereof; the predetermined threshold value is set according to the operating

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amount of the operating element , and the control means 13 reduces the absorption torque of the variable displacement hydraulic pump 2,3 when the detected engine speed decreases to the threshold value or lower.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi et al., as applied to claim 1 above, in view of Ikari (6,176,083). Izumi et al. discloses all of the claimed subject matter except for a hydraulic actuator for activating a steering mechanism and a hydraulic actuator for activating a work machine.

Ikari teaches for a load control device for an engine of a work vehicle with an engine 1, a plurality of variable displacement hydraulic pumps 2,9 driven by the engine 1, a plurality of hydraulic actuators 6,7,8 to which pressure oil discharged from the plurality of variable displacement hydraulic pumps 2,8 is supplied and that there is a hydraulic actuator 6 for activating a steering mechanism and a hydraulic actuator 7,8 for activating a work machine for the purposes of hydraulically controlling the work vehicle functions.

Since Izumi et al. and Ikari are both in the same field of endeavor the purpose disclosed by Ikari would have been recognized in the pertinent art of Izumi et al. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify

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the actuators of Izumi et al. to have a hydraulic actuator for activating a steering mechanism and a hydraulic actuator for activating a work machine for the purposes of hydraulically controlling the work vehicle functions.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi et al., as applied to claim 1 above, in view of Yoshimura et al. (6,170,262). Izumi et al. discloses all of the claimed subject matter except for the absorption torque changing means including the displacement control means controlling a displacement of the variable displacement hydraulic pump such that a differential pressure between a discharge pressure of the variable displacement hydraulic pump and a load pressure of the hydraulic actuator becomes a set differential pressure and means for changing the set differential pressure.

Yoshimura et al. teaches for a load control device for an engine of a work vehicle with an engine (not shown), a variable displacement hydraulic pump 1 driven by the engine, and actuator 2 or 3, and absorption torque changing means 10 for changing absorption torque for the variable displacement hydraulic pump 1 and that the absorption torque changing means includes displacement control means 11 for controlling a displacement of the variable displacement hydraulic pump 1 such that a differential pressure between a discharge pressure of the variable displacement hydraulic pump 1 and a load pressure of the hydraulic actuator 2 or 3 becomes a set differential pressure and means 13 for changing the set differential pressure for the purposes of smoothly operating the actuator with an operating element. See col. 1, lines 5-10.

Since Izumi et al. and Yoshimura et al. are both in the same field of endeavor the purpose disclosed by Yoshimura et al. would have been recognized in the pertinent art of Izumi et al. It

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would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the absorption torque changing means of Izumi et al. displacement control means controlling a displacement of the variable displacement hydraulic pump such that a differential pressure between a discharge pressure of the variable displacement hydraulic pump and a load pressure of the hydraulic actuator becomes a set differential pressure and means for changing the set differential pressure for the purposes of smoothly operating the actuator with an operating element.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi et al., as applied to claim 1 above, in view of Kobayashi et al. (4,773,369). Izumi et al. discloses all of the claimed subject matter except for the pressure oil being supplied from each of the plurality of variable displacement hydraulic pumps to each of the plurality of hydraulic actuators via each independent oil passage.

Kobayashi et al. teaches for a load control device for an engine of a work vehicle with an engine 1 in which a target speed is set, a plurality of variable displacement hydraulic pumps 2a,2b driven by the engine 1, a plurality of hydraulic actuators 3a,3b to which pressure oil discharged from the plurality of variable displacement hydraulic pumps 2a,2b is supplied; absorption torque changing means 5a,5b for changing absorption torque for one or more of the variable displacement hydraulic pumps 2a,2b, engine speed detection means 12 for detecting an engine speed, and control means 7 for reducing the absorption torque of the variable displacement hydraulic pump 2a,2b when the detected engine speed is decreased to a predetermined threshold value or lower and that the pressure oil is supplied from each of the

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plurality of variable displacement hydraulic pumps to each of the plurality of hydraulic actuators via each independent oil passage for the purposes of independently controlling each actuator.

Since Izumi et al. and Kobayashi et al. are both in the same field of endeavor the purpose disclosed by Kobayahsi et al. would have been recognized in the pertinent art of Izumi et al. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the actuators of Izumi et al. supplied with pressure oil from each of the plurality of variable displacement hydraulic pumps via each independent oil passage for the purposes of independently controlling each actuator.

#### ***Prior Art***

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consists of five patents.

Nakamura et al., Devier et al., Yoshida et al., Moriya et al., and Morgan are cited to show load control devices for engines of work vehicles.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thomas Lazo whose telephone number is (571) 272-4818. The examiner can normally be reached on Monday-Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Edward Look, can be reached on (571) 272-4820. The fax phone number for this Group is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thomas E. Lazo/  
Primary Examiner,  
Art Unit 3745  
September 10, 2009